

# EXHIBIT 1



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March 16, 2006

VIA EMAIL

Marcus Sernel  
Mark Pals  
Kirkland & Ellis LLP  
Aon Center  
200 East Randolph Drive  
Chicago, Illinois 60601

Re: *Affymetrix, Inc. v. Illumina, Inc.*  
Civil Action No. 04-901 JJF

Dear Counsel:

Pursuant to our agreement, Affymetrix identifies the following claim terms to be construed and its proposed constructions thereof:

As to the '716 patent:

- "Probe": A nucleic acid of known sequence that is capable of hybridizing to its complementary sequence
- "Probe intensity": A detectable signal, *e.g.*, fluorescence
- "Plurality": Two or more
- "Generating a base call identifying said unknown base": Determining which nucleotide is most likely to be present at a particular position in a nucleic acid sequence

As to the '365 patent:


- "Housing": A structure in which something is contained.

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We understand Illumina will provide its proposed constructions of these terms -- if they are different -- as well as a list of any additional terms and proposed constructions thereof on March 21.

We request that the parties agree to meet all of the deadlines that are part of the claim construction exchange and briefing schedule at 5 p.m. Eastern time. Please confirm that this is acceptable to Illumina or propose an alternative.

Sincerely,



Michael J. Malecek  
Chief Advocacy Counsel

## EXHIBIT 2

# KIRKLAND & ELLIS LLP

AND AFFILIATED PARTNERSHIPS

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March 21, 2006

## VIA E-MAIL

Daniel R. Reed  
Affymetrix, Inc.  
6550 Vallejo Street  
Suite 100  
Emeryville, CA 94608

**Re: *Affymetrix, Inc. v. Illumina, Inc.*, Civil Action No. 04-901 JJF**

Dear Dan:

I write to provide you our proposed claim constructions for the patents-in-suit. We take it that the terms you set forth in your letter are the only ones you propose to need construction, and otherwise will take the position with the Court that the remaining terms need not be construed. If that is not the case, you have not complied with our agreement (and the Court's directive) for you to propose your constructions first. In any event, here are our proposed constructions:

'531 patent	"probe array"	a collection of probes, at least two of which are different, that are surface-immobilized (chemically linked) to a single surface
'531 patent	"arranged in a spacially defined and physically addressable manner"	each probe in an array is placed in a different pre-determined location on the surface
'432 patent	"said beads being coded with an encoding system"	A property associated with a bead (separate from the binding polymer) that can be used to distinguish one bead from another
'432 patent	"target specific sequence"	A known sequence of a polymer that binds with specificity to the target at the sequence to be determined
'243 patent	"substrate"	material on whose surface polymers are synthesized

London

Los Angeles

New York

San Francisco

Washington, D.C.

## KIRKLAND &amp; ELLIS LLP

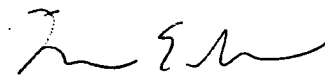
March 21, 2006

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'243 patent	"target nucleic acids"	sample nucleic acids with sequence to be determined
'365 patent	"housing"	casing that separates the probe array from the atmosphere
'365 patent	"biological polymers immobilized on a surface"	two or more biological polymers of different sequence chemically linked to a single surface
'716 patent	"probe"	A nucleic acid of known sequence that is capable of hybridizing to a complementary sequence of the unknown sample nucleic acid
'716 patent	"probe intensity"	intensity from a labeled sample nucleic acid hybridized to a probe location
'716 patent	"corresponding to probe intensities for a plurality of nucleic acid probes"	two or more probe locations each having one and only one probe intensity
'716 patent	"indicating an extent of hybridization"	indicating the strength of binding so as to distinguish a single-base mismatch
'716 patent	"comparison of said plurality of probe intensities to each other"	ranking of probe intensities from a hybridization experiment
'716 patent	"generates a base call"	identifies a nucleotide as A, C, T, or G
'716 patent	"generates a base call ... according to result of said comparison and sequences of said nucleic acid probes"	generates a base call as the base-pair complement to the probe with the highest probe intensity

We are amenable to your construction for the term "plurality," but disagree with your remaining constructions. We are also not offering any construction for terms that appear in any claims that were first identified by Affymetrix last week. Please let us know whether you agree with any of our proposed constructions, or whether you will stick with your position that these terms do not need to be construed.

Very truly yours,



Marcus E. Sernel

## EXHIBIT 3



Michael J. Malecek  
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March 27, 2006

VIA EMAIL

Marcus Sernel  
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Aon Center  
200 East Randolph Drive  
Chicago, Illinois 60601

Re: *Affymetrix, Inc. v. Illumina, Inc.*  
Civil Action No. 04-901 JJF

Dear Counsel:

Pursuant to our agreement as memorialized in Illumina's letter to the Court of March 13, 2006, Affymetrix provides its proposed constructions for the additional terms identified by Illumina as follows:

As to the '531 patent:

- "Probe array": A collection of surface-immobilized molecules, at least two of which are different, that can be recognized by a particular target.
- "arranged in a spacially defined and physically addressable manner": Located in a particular location and capable of being accessed.

As to the '432 patent:

- "said beads being coded with an encoding system": said beads being distinguishable one bead from another
- "target specific sequence": a known polymer sequence that has affinity for another sequence.



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As to the '243 patent:

- “substrate”: A material having a rigid or semi-rigid surface.
- “target nucleic acids”: Nucleic acids that have an affinity for the nucleic acid attached to the bead

As to the '365 patent:


- “biological polymers immobilized on a surface”: Two or more surface-immobilized biological polymers that are recognized by a particular target.

As to the '716 patent:

- “corresponding to probe intensities for a plurality of nucleic acid probes”: Relating to a detectable signal, *e.g.*, fluorescence, from one or more nucleic acid sequences of known sequence that are capable of hybridizing to a complementary sequence
- “indicating an extent of hybridization”: Relating to the relative binding of
- “comparison of said plurality of probe intensities to each other”: An examination of the detectable signals of two or more probes in relation to each other
- With regard to the two separate constructions relating to generating a base call, Affymetrix stands by the claim term it identified and its definition thereof.

Please confirm that Illumina intends to file its briefs on April 5 and April 14 at 5 p.m. Eastern time. Upon receiving such confirmation, Affymetrix will plan to do the same.

Sincerely,



Michael J. Malecek  
Chief Advocacy Counsel

## EXHIBIT 4

**KIRKLAND & ELLIS LLP**  
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April 3, 2006

VIA E-MAIL

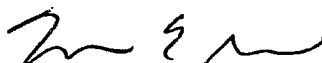
Daniel R. Reed  
Affymetrix, Inc.  
6550 Vallejo Street  
Suite 100  
Emeryville, CA 94608

**Re: *Affymetrix, Inc. v. Illumina, Inc.*, Civil Action No. 04-901 JJF**

Dear Dan:

I write to address two minor issues with respect to the proposed claim constructions I have previously provided to you. In response to the claim construction positions you have proposed, we have slightly modified our constructions with the hope of a possible compromise. Thus, we intend to propose that the term "substrate" in the '243 patent be construed to mean "a material having a rigid or semi-rigid surface on which polymers are synthesized." With respect to the term "said beads being encoded with an encoding system," we would propose a construction of "said beads having a property associated with each bead (separate from the binding polymer) that can be used to distinguish one bead from another." Please let us know whether you are willing to agree to these constructions.

Very truly yours,



Marcus E. Sernel